

# ANNUAL REPORT OF THE OHIO ACADEMY OF SCIENCE 1953

Organized 1891                      Incorporated 1892  
Affiliated with the American Association for the Advancement of Science

## OFFICERS AND COMMITTEES FOR 1953-1954

### *President*

R. A. HEFNER

### *Vice-Presidents*

- |   |   |
|---|---|
| A. <i>Zoology</i> : ALVAH PETERSON              | G. <i>Geography</i> : MILDRED DANKLEFSEN          |
| B. <i>Plant Sciences</i> : ELTON PADDOCK        | H. <i>Chemistry</i> : D. R. CLIPPINGER            |
| C. <i>Geology</i> : H. F. DONNER                | I. <i>Mathematics</i> : L. L. LOWENSTEIN          |
| D. <i>Medical Sciences</i> : H. G. SCHLUMBERGER | J. <i>Science Education</i> : C. E. HOEL          |
| E. <i>Psychology</i> :                          | K. <i>Anthropology and Sociology</i> : A. C. MAHR |
| F. <i>Physics and Astronomy</i> : W. H. SHAFFER | L. <i>Conservation</i> : C. S. JOHNSON            |

### *Secretary*

RUSH ELLIOTT

### *Treasurer*

R. M. GEIST

### *Historian*

W. H. ALEXANDER

## COMMITTEES

### *Executive Committee*

*Ex-officio*: R. A. HEFNER, RUSH ELLIOTT, R. M. GEIST

*Elective*: G. W. BLAYDES AND R. A. POPHAM

### *Membership*

- |   |  |
|---|--|
| A. <i>Zoology</i> : J. A. MILLER              | G. <i>Geography</i> : J. T. MADDOX                   |
| B. <i>Plant Sciences</i> : A. H. BLICKLE      | H. <i>Chemistry</i> : W. F. KIEFFER                  |
| C. <i>Geology</i> : J. M. SCHOFF              | I. <i>Mathematics</i> :                              |
| D. <i>Medical Sciences</i> : E. H. ELLISON    | J. <i>Science Education</i> : VIOLET R. STRAHLER     |
| E. <i>Psychology</i> :                        | K. <i>Anthropology and Sociology</i> : CLARENCE WARD |
| F. <i>Physics and Astronomy</i> : L. R. WYLIE | L. <i>Conservation</i> : E. L. WICKLIFF              |

### *Nominating*

VICE-PRESIDENTS OF 1952-1953, R. P. GOLDTHWAIT, Chairman

### *Program*

VICE-PRESIDENTS AND SECRETARY

### *Election of Fellows*

VICE-PRESIDENTS AND SECRETARY

### *Library*

ACADEMY LIBRARIAN, MORTON COBURN, Chairman

W. C. BEAVER.....Term expires 1955

A. W. LINDSEY.....Term expires 1957

### *Publications*

SECRETARY, Chairman

W. C. BEAVER.....Term expires 1955

A. W. LINDSEY.....Term expires 1957

### *Resolutions*

G. B. BARBOUR, Chairman,

Term expires 1954

W. A. MANUEL.....Term expires 1955

J. W. GEBHART.....Term expires 1956

### *Necrology*

A. E. WALLER.....Term expires 1954

J. H. MELVIN.....Term expires 1955

H. H. M. BOWMAN, Chairman

Term expires 1956

### *Trustees of Research Fund*

K. G. A. BUSCH, Chairman. Term expires 1954

E. S. THOMAS.....Term expires 1955

G. W. BLAYDES.....Term expires 1956

THE OHIO JOURNAL OF SCIENCE 53(4): 244, July, 1953.

*Academy Representatives*

1. On the Joint Administrative Board of the Ohio Journal of Science:  
 W. C. BEAVER.....Term expires 1955  
 A. W. LINDSEY.....Term expires 1957
2. On the Council of the A.A.A.S.: J. F. STANFIELD

*The Council for 1953-1954*

W. C. BEAVER	R. M. GEIST	ELTON PADDOCK
G. W. BLAYDES	R. A. HEFNER	A. H. PETERSON
A. H. BLICKLE	C. E. HOEL	R. A. POPHAM
R. H. BÖHNING	C. S. JOHNSON	H. G. SCHLUMBERGER
K. G. A. BUSCH	W. F. KIEFFER	J. M. SCHOFF
D. R. CLIPPINGER	F. H. KRECKER	W. H. SHAFFER
MORTON COBURN	A. W. LINDSEY	W. H. SHIDELER
MILDRED DANKLEFSSEN	L. L. LOWENSTEIN	VIOLET R. STRAHLER
H. F. DONNER	J. T. MADDOX	CLARENCE WARD
RUSH ELLIOTT	A. C. MAHR	E. L. WICKLIFF
E. H. ELLISON	J. A. MILLER	J. N. WOLFE
		L. R. WYLIE

## REPORT OF THE SIXTY-SECOND ANNUAL MEETING OF THE OHIO ACADEMY OF SCIENCE

The sixty-second annual meeting was held on the Ohio State University campus on April 23, 24 and 25. Attendance and size of program presented were the largest in the history of the Academy. The fifth State Science Day of the Junior Academy of Science was the largest and most successful in the history of that group also, 233 exhibits presented by 246 Junior Academy members which had won superior rating in the District Science Days being in competition. Fifteen Junior Academy members were declared eligible for Ohio Academy of Science scholarships.

Programs were presented by all sections of the Academy and meeting in joint session with Academy sections were the Ohio Psychological Association, The Ohio Section of the American Physical Society, The Ohio Folklore Society and The Ohio Wildlife Management Association.

Excellent commercial exhibits were made by a large number of companies.

The annual banquet and business meeting were held in the East Ballroom of the Ohio Union on Friday evening at 6:45 P. M. Dr. A. E. Waller served as a most excellent toastmaster, greetings were extended from the Ohio State University by Vice-President B. L. Stradley, and the response for the Academy by Dr. W. H. Shideler. The presidential address by Dr. G. W. Blaydes was titled, "The Romance of Domesticated Plants."

The annual report of the Secretary which summarized the past year's activities included a report on membership, there having been 183 members, 10 Corporation and one Institution member added during the year. The present membership includes 1,341 members, 23 Corporation members, and 22 Institution members.

The following persons were announced as newly elected Fellows of the Academy:

WILLIAM ADAMS, JR.	S. O. HOERR	G. W. PRESCOTT
C. S. BACON	T. D. HOWE	A. E. PRINCE
C. H. BOWEN	J. J. JACOBY	L. S. PUTNAM
G. W. BURNS	A. G. JAMES	C. R. REESE
C. A. CLENDENNING	E. V. JOTTER	IRVING ROTHCHILD
T. J. COBBE	K. L. KELLEY	L. L. SHETLER
JEAN M. CUMMINGS	T. C. KENNARD	R. S. SIGAFOOS
W. E. DUNHAM	DOROTHY J. KNULL	H. V. TRUMAN
E. H. DUSTMAN	A. W. MARION	E. G. VOSS
W. S. EMERSON	MILDRED F. MARPLE	A. M. WALLACE
R. R. FINLAY	C. B. MOKE	C. R. WEAVER
F. W. FISK	J. L. MORTON	W. E. WILSON
WALTER FRYE	W. G. MYERS	CLAUDE-STARR WRIGHT
OTTO GLASSER	C. M. PALMER	H. C. YINGLING, JR.
L. L. HARROLD	H. J. PINCUS	P. E. ZIMPFER
C. E. HOEL	J. B. POLIVKA	R. M. ZOLLINGER

The membership approved an amendment to provide for a Director of Public Relations who is also to be a member of the Council.

Dr. F. H. Krecker, Executive Secretary of the Junior Academy, announced that awards to outstanding high school teachers were presented to Forrest Buchanan, Amsterdam; Helen

Deeter, Greenville; Charles E. Hoel, Bexley; R. J. Lockhart, Brecksville; Irwin Slesnick, Archbold; and John W. Wargo, Manchester Rural, Reinersville.

The Ohio Journal of Science Award for Excellence in Research was presented to Dr. Elizabeth W. Smith of Kent State University by Dr. Earl Green, Editor of the Ohio Journal of Science.

The report of the Necrology Committee was presented by Dr. H. H. M. Bowman, of the Nominating Committee by Dr. A. N. Solberg, and of the Resolutions Committee by Dr. A. W. Lindsey.

Respectfully submitted,

RUSH ELLIOTT, *Secretary*.

#### REPORT OF THE EXECUTIVE COMMITTEE AND COUNCIL

The Executive Committee met on December 5, 1952, and again on April 23, 1953, and the Council on December 6, 1952, and again on April 23, 1953.

An amendment to provide for a Director of Public Relations was authorized and passed.

A progress report on the work accomplished by the special committee on "Ohio Flora" was presented. To date a mimeographed report covering 10,000 Woody Plants has been issued and a study of Pteridophytes in Ohio is now in progress.

The Council approved the recommendation of the Executive Committee that in order to continue a close working relationship between the Academy and the Junior Academy, that the Executive Committee be empowered to appoint the District College Representatives of the Junior Academy Council and the Executive Secretary for the Junior Academy, the Council members to serve for a three-year term and the Secretary for a five-year term, the latter being subject to annual review by the Executive Committee of the Academy.

The Executive Committee recommended and the Council approved the following requirements for companies presenting commercial exhibits at the Annual Meeting: 1. Holding corporation membership; or 2. Payment of \$25.00 fee to the Treasurer of the Academy; or 3. Running a minimum of a half page advertisement in at least one issue of the Ohio Journal of Science during the year, or the minimum equivalent of this in advertising cost.

The 1954 Annual Meeting is to be held at Ohio University on April 15, 16 and 17 as the first major event by a visiting group of the sesquicentennial program of the University; the 1955 meeting at Ohio Wesleyan University and the 1956 meeting at Bowling Green State University.

Respectfully submitted,

RUSH ELLIOTT, *Secretary*.

#### REPORT OF THE TREASURER

##### CURRENT EXPENSE FUND

##### Fiscal Year 1952

##### RECEIPTS:

Bank Balance, January 1, 1952.....	\$1,121.28
Membership dues.....	4,447.00
Sale of Publications.....	6.37
Interest, U. S. Bonds.....	47.50
	<hr/>
	\$5,622.15

##### EXPENDITURES:

Subscriptions and Engraving, Ohio Journal of Science.....	\$2,325.18
Printing Annual Report.....	299.32
Printing News Letters, Junior Academy.....	178.00
Programs for Annual Meeting.....	175.75
Postage, office supplies, bank charges and other administrative expenses.....	821.98
Bank Balance, December 31, 1952.....	1,821.92
	<hr/>
	\$5,622.15

##### RESEARCH FUND

##### Fiscal Year 1952

##### RECEIPTS:

Bank Balance, January 1, 1952.....	\$ 291.28
Interest, U. S. Bonds.....	7.50
Interest, Fort Hayes Hotel Bonds.....	52.00
Dividends, Banc-Ohio Stock.....	27.50
Grant, A. A. A. S.....	248.00
Gift, Dr. Herbert Osborn.....	100.00
	<hr/>
	\$ 726.28

## EXPENDITURES:

Grant, Janice C. Beatley.....	\$ 60.00
Grant, Ohio Flora Committee.....	188.00
Grant, William Adams, Jr.....	100.00
Grant, Robert M. Crowell.....	65.00
Grant, Louis M. Thomson, Jr.....	80.00
Bank Charges.....	3.07
Bank Balance, December 31, 1952.....	230.21
	<u>\$ 726.28</u>

## REPORT OF THE TRUSTEES OF THE RESEARCH FUND

*To the Ohio Academy of Science:*

The Trustees of the Research Fund present the following statement covering the calendar year 1952, and extended to show the status of the fund as of 21 April, 1953.

## INCOME:

Interest on Securities—	
U. S. Savings Bonds.....	\$ 7.50
Ft. Hayes Hotel Bonds.....	52.00
Banc-Ohio Stock.....	27.50
Grant from A. A. A. S.....	248.00
Gift per Dr. Herbert Osborn.....	100.00
Total Income.....	<u>\$435.00</u>

## EXPENSES:

*Grant on Vegetation (Janice C. Beatley).....	\$ 60.00
*Grant to Ohio Flora Committee (Glenn W. Blaydes).....	188.00
*Grant on Fern Study (Wm. Adams, Jr.).....	100.00
Grant, Robert M. Crowell.....	65.00
Grant to Louis M. Thomson (reconstruction of giraffe skeletal material).....	80.00
Bank Charges.....	3.07
Total Expenses.....	<u>\$496.07</u>
Excess Expense over Income.....	61.07
	<u>\$496.07</u>

## YEAR 1952:

Balance 1 January, 1952.....	\$291.28
Less Excess Expense Over Income.....	61.07
Balance 31 December, 1952.....	<u>\$230.21</u>

## PERIOD 1 JANUARY TO 21 APRIL, 1953:

Balance 1, January, 1953.....	\$230.21
Deposit, 2 February.....	12.50
	<u>\$242.71</u>
Less Grant to Cecil Riser.....	50.00
Total Balance.....	<u>\$192.71</u>
Cash Deposit on Hand.....	7.50
‡Balance on Deposit.....	<u>\$200.21</u>

\*The starred grants were approved before the report presented at the Annual Meeting, April, 1952.

‡This balance does not include a credit of \$26 from interest received but not yet banked, nor to a grant due from A.A.A.S. for 1953; there is also a small deduction due for a bank charge. These items will appear in the 1953 report.

E. S. THOMAS,  
K. G. A. BUSCH,  
G. B. BARBOUR, *Chairman.*

## REPORT OF THE LIBRARIAN

The librarian is pleased to inform the Academy that its official journal is used in four hundred and seventy-one exchanges. Seventy percent of these exchanges are with public and private institutions in fifty-seven foreign countries. Thirty percent of these exchanges are with domestic institutions in forty-three states.

EXCHANGE AGREEMENTS CONCLUDED BETWEEN THE O. A. S. AND  
DOMESTIC AND FOREIGN INSTITUTIONS  
1951 - APRIL, 1953

	1951	January, 1952, to April, 1953	Percent increase over 1951
Total number of exchanges.....	400	471	17.75
Domestic exchanges.....	120	134	11.66
Foreign exchanges.....	280	337	21.35

NUMBER OF INDIVIDUAL TITLES RECEIVED IN EXCHANGE FOR THE  
OHIO JOURNAL OF SCIENCE, SEPTEMBER, 1951, TO DATE

1953	1952	1951
9	102	47

The largest number of foreign exchanges are with the following countries:

Argentina.....	16
Australia.....	16
Brazil.....	20
Canada.....	19
England.....	15
France.....	13
Japan.....	17
Spain.....	16
U. S. S. R.....	20

Sales of the Academy's publications for the period January, 1952, through April, 1953, amounted to twenty-seven dollars and thirty-seven cents (\$27.37). One dollar and thirty-three cents was withheld for the purchase of tax stamps; the remainder of the money was turned over to the Treasurer of the Academy.

Respectfully submitted,

MARTIN COBURN, *Librarian*.

REPORT OF THE JOINT ADMINISTRATIVE BOARD OF  
THE OHIO JOURNAL OF SCIENCE

The annual meeting of the Joint Administrative Board of The Ohio Journal of Science was held at Columbus, Ohio, April 8, 1953. The meeting was called to order by Board Chairman Dr. Spieker. Present were Drs. Spieker and Meyer, representing the Ohio State University, Drs. Tidd and Beaver, representing the Ohio Academy of Science, and Drs. Green, Popham, Böhning and Fisk of the Ohio Journal staff.

Dr. Spieker was elected Chairman of the Board for the year 1953-54. Minutes of the last meeting were approved as read.

The report of the Business Manager was approved as read. This report, which is attached to these minutes, was mainly in the form of a financial statement for Vol. 52.

The report of the Editor was approved as read. A copy of this report is appended to these minutes.

The selection by the Editor of Dr. Frank W. Fisk as Book Review Editor and Associate Editor was approved by the Board. Dr. Fisk has been serving in this capacity since July 1, 1952.

Dr. Green announced that an awardee had been chosen by the judges to receive the \$150 prize for the outstanding paper submitted in the field of zoology according to the 1952-53 contest rules. The award will be made at the annual banquet.

Dr. Green announced that he has on hand sufficient manuscripts to fill issues of the Journal up to the March, 1954, number. The symposium on solar energy will probably be published in the September issue.

Dr. Fisk presented the report of the Book Review Editor and stressed the fact that there is a serious problem in the matter of finding sufficient space in the Journal to publish the very large backlog of book reviews presently on hand. Ways and means of speeding the publishing of these book reviews were discussed.

Dr. Popham submitted his resignation as Business Manager, stating that he had served in this capacity for four years. Following a discussion Dr. Popham agreed to serve as Business Manager until a suitable person could be selected to assume the duties of the office. Dr. Popham was nominated and elected Business Manager for Vol. 53.

Dr. Böhning presented an oral report of the Advertising Manager in which he stressed the fact that it is increasingly difficult to secure advertising for the Journal and that he anticipates that the amount of advertising secured will not appreciably increase due principally to the fact that advertisers consider the Journal a regional one. Due to the fact that the most strenuous efforts of the Advertising Manager have not yielded an increasing amount of advertising, he suggested that the office of Advertising Manager be abolished, and that the duties be assumed by the Business Manager. The Board decided to eliminate the office of Advertising Manager and to ask the incoming Business Manager to assume these duties.

Due to the fact that Dr. Green is to be on a two years leave of absence from the Ohio State University commencing about September 1st, he offered his resignation to the Board. Dr. Green's resignation was accepted by the Board with regret. Dr. R. H. Böhning was elected Editor to succeed Dr. Green. The date of the transfer of duties of Editor is to be mutually agreed upon by Dr. Böhning and Dr. Green.

At the insistence of the chairman, the Board extended to Dr. Green its expression of warm appreciation for his efficient stewardship of the office of Editor.

Dr. Spieker was instructed to appoint a committee to audit the books of the Business Manager for Vol 52.

It was decided by the Board to continue to offer for another year the Ohio Journal of Science Award for Excellence in Research. The field represented by the Section of Geology of the Academy was chosen as the one in which to make the award in 1954.

The Business Manager was instructed to charge non-authors seeking reprints of papers published in the Journal 150% of the cost of the reprints.

There being no further business the board adjourned.

Respectfully submitted,

RICHARD A. POPHAM,  
*Secretary of the Board.*

THE OHIO JOURNAL OF SCIENCE

VOLUME 52, FISCAL YEAR 1952

RECEIPTS

Bank balance January 1, 1952.....	\$1,370.64
Ohio State University—Paid for subscriptions.....	2,000.00
Ohio Academy of Science—Paid for subscriptions.....	2,135.00
Non-members—Paid for subscriptions.....	386.00
Sale of separate numbers, volumes and reprints.....	222.30
Ohio Academy of Science—Paid for one-half cost of plates.....	231.14
Ohio Academy of Science—Paid for Annual Report.....	103.32
Miscellaneous.....	17.50
Advertisements.....	737.52
	<hr/>
	\$7,203.42

EXPENDITURES

Spahr and Glenn Company—printing Journal.....	\$4,544.00
Bucher Engraving—Plates.....	585.20
Postage and Express.....	214.57
Secretary and labor.....	48.50
Office supplies and bank charges.....	94.64
Advertising the Ohio Journal of Science.....	150.00
Bank balance, December 31, 1952.....	1,566.51
	<hr/>
	\$7,203.42

## THE OHIO JOURNAL OF SCIENCE

REPORT OF THE EDITOR OF VOLUME 52, 1952, TO THE  
JOINT ADMINISTRATIVE BOARD

Volume 52 of The Ohio Journal of Science contained 368 pages of text and 4 pages of index, not including 24 pages of cover. The text pages were devoted to 59 articles in eight fields of science (as represented by sections of the Ohio Academy of Science) to 59 book notices, and to various announcements, and advertisements. Among the articles were two symposia, one on "Physical methods in qualitative and quantitative chemical analysis," and one on "The Undergraduate Physics Curriculum." Also there was one collection of articles on the Orleto Farms Mastadon.

Manuscripts have been submitted and accepted to fill the entire of volume 53.

The General Index for the years 1900 to 1950 of The Ohio Naturalist and The Ohio Journal of Science, prepared by Ethel Melsheimer Miller, has been published.

Respectfully submitted,

EARL L. GREEN, *Editor*.

## NECROLOGY REPORT FOR 1952-1953

It is the sad duty of the Necrology Committee to report the passing of 15 members of the Academy of Science during the period between April 1952 and April 1953. The deceased members are herewith listed with a brief biographic sketch of each:

## VERNON S. CULP

Mr. Vernon S. Culp, Science teacher in West High School, Akron for 36 years and member of the Science Education Section since 1930.

Mr. Culp was born in Nappanee, Indiana on Sept. 6, 1889. After attendance in local public schools he entered Goshen College at Goshen, Indiana and secured the Bachelor of Arts degree in 1915. He later attended the University of Indiana and was granted the Master of Arts degree. He did additional graduate work at Ohio State University, Akron University and Western Reserve University. In 1916 he began teaching in West High School, Akron in chemistry, physics, German and photography. During World War II Mr. Culp served as physics teacher to the Air Forces stationed at Kent State University. Since 1929 he has been Boy's Counselor at West High School.

He was a member of the National and State Education Associations and the American Chemical Society, the A.S.A.S., the Ohio Academy of Science, the Cleveland Regional Council of Science Teachers and the State and National Science Teacher's Association. He was a member of the Torch Club. For many years Mr. Culp served as treasurer of N. E. Ohio Chemistry Teacher Association. He was married in 1914 to Sylvia E. Miller. To this union were born 2 children, Eugene E. Culp, and Mrs. Julia Marsten. He died on Dec. 15, 1952, of coronary thrombosis and was buried in Rose Hill Cemetery, Akron.

## MRS. MILDRED VICKROY DAVIS

Mrs. Mildred Vickroy Davis, Science teacher in the High Schools of Connelssville and Glouster, Ohio and a member of the Science Education Section.

She was born on Nov. 3, 1897 in Union Township, Morgan County, Ohio. After preparation in the public schools matriculated in Ohio University from which she received the Bachelor of Arts degree. She also later did graduate work at Ohio State University. In 1934 she was married to Oscar Roy Davis by whom she had one child, Ella Mae Davis. She died on May 29, 1952 of a cerebral hemorrhage and was buried in Maplewood Cemetery, Glouster, Ohio.

## ERNEST SANFORD DIX

Professor Ernest Sanford Dix, geographer and member of the Geography Section of the Academy.

Mr. Dix was born in Starrucca, Penna. on June 3, 1919. After a public school education he entered Penn. State College and was graduated in 1941, with the Bachelor of Science degree. Then he was awarded a Garver Fellowship at Clark University and secured the M.A. degree in 1948. In succeeding years he was visiting lecturer at the University of Kansas City, and in 1949 became assistant Professor of Geography in Miami University at Oxford, Ohio. In 1952 he secured a leave of absence to become Visiting Lecturer on Geography in the University of Malaya at Singapore where his untimely demise occurred.

In 1943 Prof. Dix married Louise Carter and to them were born two sons, Terry Elliot Dix born in 1947 and Theodore Howard Dix born 1949. He was a member of the Association of American Geographers, the National Council of Geography Teachers, Phi Eta Sigma, Gamma Sigma Delta and Phi Kappa Phi fraternities. Prof. Dix died on April 5, 1952 of polio-encephalitis in Singapore and was buried in that city.

## MR. LOUIS A. ELSSESSER

Mr. Louis A. Elsesser, teacher of Mathematics and Science, and a member of the Conservation Section.

Mr. Elsesser was born in Tiffin, Ohio on Dec. 29, 1894. After graduation from the Tiffin High School he entered Heidelberg College in Tiffin and received the Bachelor's degree about 1918 and later a Master's degree from Ohio State University. In 1918 he became principal of the high school at Litchfield, Ohio and the next year Superintendent of its schools. Within the three years he served as co-normal director for West Union and Carrollton and in September 1923 until his death in 1952 he was the teacher of mathematics and science in the Myron T. Herrick Junior High School in Cleveland. In this work he was highly successful and established the first School Conservation Museum in Cleveland. From this conservation programs have developed in many high schools in Ohio. He also served 18 years on the Greater Cleveland Boy Scouts Council and as District Commissioner, a Sea Scout Master, Merit Badge Counselor and an Eagle Scout, which qualified him for 39 merit badges. He for years rendered great service in the Boy Scouts of America.

In 1940 he married Mrs. Thelma E. Storey. No issue accrued from this union. On March 29, 1952 Mr. Elsesser suffered a fatal cerebral hemorrhage and was buried in Calvary Cemetery, Cleveland, Ohio.

## RAY C. FRIESNER

Dr. Ray C. Friesner, Professor of Botany at Butler University, Indianapolis and member of the Plant Science Section.

Dr. Friesner was born at Bremen, Ohio on Feb. 8, 1894 and after graduation from the Bremen high school matriculated in Ohio Wesleyan University and was graduated with the Bachelor of Arts degree in 1916. He later went to the University of Michigan for graduate study and received the Ph.D. degree in 1919. The same year he took a position as instructor at Butler University and in 1920 a separate Department of Botany was set up and of which he became the head, which position he held until his death. He sponsored the celebrated Butler Botanical Studies comprising the researches of his students and candidates for Master's degrees. In 1944 the alumni of the Department celebrated its Silver Anniversary with a special memorial issue of the Studies.

From 1944 to 1947 Dr. Friesner was Director of the Graduate Division. In 1947 he became Dean of the College of Arts, while continuing as Head of the Botany Department. He received many honors, including election to Phi Beta Kappa, Phi Kappa, Sigma Xi. He was a member of the A.A.A.S. the Botanical Society of America, as well as the State Academies of Michigan, Ohio, Indiana and Pennsylvania, Illinois and Washington. He also belonged to the Eugenics Society and the American Assn. of University Professors. He published numerous papers on the Indiana flora and a memorial issue of his Key to Indiana Plants is being published.

In 1925 Dr. Friesner married Miss Gladys Miller. In 1948 he was awarded the Holcomb Award for meritorious service to Butler University, and in 1951 he was given an honorary Doctor of Science degree from his alma mater Ohio Wesleyan University. He died of coronary occlusion on Dec. 1, 1952, and was buried in a rural cemetery near his native Bremen, Ohio.

## MARION DWIGHT HARBAUGH

Mr. Marion Dwight Harbaugh, President of the Lake Superior Iron Ore Association and member of the Geology Section.

Mr. Harbaugh was born in Kansas City, Mo. on May 18, 1892. After his elementary education Mr. Harbaugh entered the University of Wisconsin and received the B.Sc. degree in mining engineering in 1923. In 1925 from the same institution he obtained a Master of Science degree in geology. From 1910 to 1919 he was engaged in the practice of civil engineering making surveys for railways, highways, and municipal projects in Missouri and Arkansas. While doing graduate work at Wisconsin he was employed in the Department of Geology as an assistant and also on research work for the State Geological Survey. From 1923 to 1924 he was employed as geologist for the American Aluminum Company in fluorspar explorations in Kentucky and Illinois and also on hydro-electric projects in North Carolina. In 1924 he returned to Wisconsin University as Instructor in Engineering Geology while employed also on various mining and petroleum surveys in the field. From 1927 to 1929 Mr. Harbaugh was engaged in professional work as an economic geologist in the United States, Canada, Newfoundland and Mexico.

In 1929 he became the executive secretary for the Tri State Zinc and Lead Ore Producers Assn. with headquarters at Miami, Okla. engaged with administrators work and technical investigations, publications etc. until 1936. In 1937 he moved to Cleveland Ohio to become the Vice President of the Lake Superior Iron Ore Assn. He served as an executive officer and technical advisor for the Company and was editor of the volume on *Lake Superior Iron Ores* published in 1938 and a monograph, *Iron Ore*, published in 1948 by the Mining Congress Journal. In 1951 he was elected president of the Lake Superior Iron Ore Association which office he held until his death.



In 1924 Mr. Harbaugh married Marjorie B. Warvelle and to them were born John Warvelle Harbaugh, Daniel Warvelle Harbaugh, Philip Warvelle Harbaugh, Marjorie Bangs Harbaugh and Sylvia Prettyman Harbaugh. He died on March 19, 1952 of coronary thrombosis and was buried at Hudson, Ohio.

#### HAROLD CHARLES HULME

Mr. Harold Charles Hulme, Science teacher in Warren G. Harding Senior High School, Marion, Ohio and member of the Science Education Section.

Mr. Hulme was born at Leavittsburg, Ohio on Dec. 19, 1905. In 1932 he became the teacher of Natural Science in the Warren G. Harding Senior High School at Warren, Ohio but was especially active in the field of botany. His interest in travel was one of the impelling forces of his professional work and as a result of this he organized trips for his students to many distant parts of the United States, Canada, and Mexico—always with the purpose of fostering in them an interest in the natural sciences. He was also devoted to music and dramatic art and was an inspirational power for the encouragement of cultural influences in the lives of his students. From the inception of the Ohio Academy of Science News Letter, the official organ of the Junior Academy, he was its indefatigable editor, and to whose memory the issue of November 1952 was dedicated.

Mr. Hulme never married and at the untimely age of 46 was stricken with carcinoma due to which his death occurred on Sept. 13, 1952. He was buried in Crown Hill Cemetery, Vienna, Ohio.

#### HARVEY EVERT HUBER

Professor Harvey Evert Huber. Head of the Department of Biology at Ohio Northern University and member of the Zoology Section since 1912.

Professor Huber was born at Bluffton, Ohio on March 19, 1884 and after a public school education entered Ohio Northern University and was graduated in 1908 with the Bachelor of Arts degree. The following year he received the Bachelor of Science degree from the same institution and in 1912 he received the Master of Arts degree from Yale University. He also pursued some graduate study at the University of Wisconsin, but since 1913 had been on the Faculty at Ohio Northern and for many years until 1952 served as Dean of its College of Arts and Science.

In 1913 he married Miss Ida May Cotner. To this union one son, Max Marvin Huber, now of South Bend, Indiana, was born. Dean Huber was a member of numerous honorary organizations including Alpha Phi Gamma, Sigma Phi Epsilon and Kappa Kappa Psi. He was a member of the A. A. A. S. and a Fellow of the Ohio Academy of Science. He was active in Masonry and had attained the 32° of the Scottish Rite. He was also a Past Patron of the the Order of the Eastern Star.

On April 21, 1953 Dean Huber died suddenly of coronary thrombosis leaving his wife and one son surviving. The interment was in the Ada Cemetery at Ada, Ohio.

#### CLARENCE HAMILTON KENNEDY

Dr. Clarence Hamilton Kennedy, Professor of Entomology, Ohio State University and Fellow of the Zoology Section.

Dr. Kennedy was born in Rockport, Indiana on June 25, 1879. He received the A. B. degree from Indiana University in 1902 and the M. A. degree in 1903. In 1914 he obtained an M. A. degree from Stanford University and the degree of Doctor of Philosophy from Cornell in 1919.

In 1902 and 1903 he served as an assistant at Indiana University and then accepted a position on the scientific staff of the U. S. Bureau of Fisheries. In 1908 he toured Oregon and Texas as a collector for the herbarium of Mount Holyoke College. From 1913 to 1915 he was employed as a scientific artist. From 1915 to 1917 he was an instructor in biology and limnology at Cornell, and from 1918 to 1918 at North Carolina University. In 1919 he came to Ohio State University as Instructor in Entomology. He became an assistant Professor of the subject in 1921 and associate in 1930 and Professor in 1933 which chair he occupied to his death. He was also in charge of entomology at the Franz Stone Laboratory from 1920 to 1938. He was summer instructor at Biological Stations in Indiana and Cornell.

In 1927 Dr. Kennedy married Miss June Findley. To this union two children were born, Bruce Hamilton Kennedy and Mary Janet Kennedy. Dr. Kennedy was honored by his alma mater with a honorary Doctor of Science in 1950. He was a member of the A. A. A. S. He was President of the American Entomological Society in 1935 and managing Editor of its *Annals*. He was a member of the Economic Entomologists, the Society of Naturalists, on the Editorial Board of the *Amer. Ecological Society*, Fellow of the Ohio Academy of Science and its Vice President for Zoology in 1926 and 1937. He was also a member of the Indiana Academy of Science a Fellow of the Entomologist Society of London and the Société Entomologique of France. He was a specialist on the Odonata of the United States. Dr. Kennedy suffered a fatal cerebral hemorrhage on June 6, 1952 and was subsequently cremated.

#### CHARLES HERMAN KUEHNLE

Mr. Charles Herman Kuehnle, Science Teacher in Canton and member of the Plant Science Section.

Mr. Kuehnle was born in Crawford County, Ohio on Oct. 16, 1891. He secured his early education in the public high school from which he entered Kent State University and secured the Bachelor of Science in Education in 1934 and the Master of Arts degree in 1939 from the same institution. His first position was that of science teacher in District 8 in Crawford County and a few years later became principal of the East Side High School in Bucyrus. During World War I he served his country as a Sergeant in the Army. After his return to civil life he accepted the position as biology teacher and Head of the Biology Department at Lincoln High School Canton, Ohio which he held until his death.

In 1917 Mr. Kuehnle had married Miss Elsie Sherer who preceded him in death. There were no children to this union. He had been elected to the Ohio Academy of Science in 1934 and was known to many members as a conscientious and inspiring teacher of biology.

He died of pneumonia on April 15, 1952 and was buried in Oakwood Cemetery at Bucyrus, Ohio.

#### CHARLES ELLISON MACQUIGG

Dean Charles Ellison MacQuigg, Dean of the College of Engineering at Ohio State University and Fellow of the Geology Section.

Dr. MacQuigg was born on Jan. 19, 1885 at Ironton, Ohio and after a public school education he matriculated in Ohio State University from which he was graduated with the degree of Mechanical Engineer in 1909.

In 1912 he married Miss Lillian Rodgers and to them were born three sons, Rodger Ellison MacQuigg, David Ellison MacQuigg and Charles Harrison MacQuigg. From 1909 to 1910 he was employed by the Santa Fe Railroad as a civil engineer, and from 1910 to 1912 in charge of testing for the Anaconda Copper Co. In 1912 he took the position as head of the Metallurgy Dept. at Penn State College where he remained until 1917. During 1917 to 1919 he served in the Army with the commission of Captain in the Ordinance Dept and later until his death as a Lt. Col. in the Officers Reserve Corps. From 1919 to 1937 he conducted research for the Carbide and Carbon Co. and from 1937 until his death he was Dean of the Engineering College of Ohio State University. He was also Director of the Ohio Engineering Experiment Station since 1937. He was a councillor of the Ohio State Research Foundation and a member of the Ohio Water Researches Board.

He was a Morehead Medalist of the Internat. Acct. Assn.; member of the Assn. Inst. of Mining and Metall. Engineers; of the Amer. Soc. Mech. Engineers; President in 1947-1948 of the Amer. Soc. for Engineering Ed; Fellow since 1947 of the Ohio Academy of Science; member of the Newcomen Soc. A. A. S. Amer. Soc. for Metals; Sigma Xi, Tau Beta Pi and contributor to numerous technical journals. On April 24, 1952 Dean MacQuigg suffered a fatal attack of a virus infection at his home in Columbus and was buried in Ironton, Ohio.

#### JOHN B. MCGREW

Mr. John B. McGrew, Attorney of Springfield, Ohio and member of the Physics Section.

Mr. McGrew was born on Oct. 6, 1870 in Springfield and lived there his entire life. After a public school education he entered Wittenberg College and was graduated with the Bachelor of Arts degree in 1891. He then attended the Law School of Columbia University New York and graduated with the Bachelor of Law degree in 1894 and was admitted to the Bar of New York in June 1894, but in October returned to Springfield was admitted to the Bar in Ohio. For the rest of his life he practiced law in Springfield and served as Prosecuting Attorney for Clark County from 1900 to 1906. In Feb. 1906 Mr. McGrew married Miss Elizabeth R. Little. There was no issue to this union. As an attorney he had a great variety of interest. He was a member of the Springfield Archeological Society, the A. A. S., The Clark County Historical Society, Amer. Museum of Nat. Hist.; The Young Men's Literary Club, Trustee of the Warder Public Library of Clark County, a warden of Christ Episcopal Church, Secretary and Trustee of the Ohio Masonic Home, Past Grand Commander of the Knights Templar of Ohio; Alpha Tau Omega fraternity, the Clark County Bar Assn.; the Ohio State Bar Assn. and the Amer. Bar Association. On August 21, 1952 Mr. McGrew suffered an automobile accident which caused his death on August 30, 1952. He was buried in Ferncliff Cemetery, Springfield.

#### HUGH EMERSON SETTERFIELD

Dr. Hugh Emerson Setterfield, Assoc. Professor of Anatomy at Ohio State University and member of the Medical Science Section.

Dr. Setterfield was born near Shelby, Ohio on May 12, 1900 and after attending local public schools he entered Wittenberg College and was graduated with its A. B. degree in 1923. In 1924 he secured the Master of Science degree at Ohio State University. He had started teaching zoology at Wittenberg College and was especially interested in anatomy on which he published numerous articles. After some teaching at Ohio State in 1924 he moved to North Dakota Agricultural College as Instructor in Zoology and from 1925 to 1927 he served as Instructor in Zoology at Ohio State University and from 1927 to 1929 as Instructor in Anatomy, from 1929 to 1937 as assistant Professor and from 1937 to his death was associate Professor of Anatomy at Ohio State.

Dr. Setterfield while at Ohio State pursued graduate study in Anatomy and was granted the Ph.D. degree in 1935. He belonged to numerous societies and since 1943 was national president of the Alpha Epsilon Delta national honorary premedical society. He was also a member of Kappa Phi Kappa, Gamma Alpha, Sigma Xi and Nu Sigma Nu medical fraternity. He was the associate editor of the Scalpel, organ of Alpha Epsilon Delta. He was a member of the Ohio Academy of Science since 1924 and a Fellow since 1935 and also a Fellow of the A. A. A. S.

In 1952 Dr. Setterfield married Mrs. Maria Voskamp. He was the father of these children, Halder Hugh Setterfield of Columbus and Suzanne Setterfield and Elizabeth Setterfield of Waterford, Conn. On March 16, 1953 Dr. Setterfield died of coronary thrombosis and was buried in Union Cemetery Columbus, Ohio.

#### ALLYN COATS SWINNERTON

Dr. Allyn Coats Swinnerton, Head Dept. of Geology at Antioch College and member of the Geology Section.

Dr. Swinnerton was born in New Berlin, New York, on September 1, 1897. After attending local public schools he entered Williams College and received the Bachelor of Arts degree in 1919. In 1920 he secured a Master of Science degree at Harvard and the Ph.D. degree in 1922. In the same year, 1922, he joined the Faculty of Antioch College and married Miss Matilda Saunders. There were no children born to this union. He served as head of the Geology Department at Antioch since 1922, but from 1932 to 1942 was also assistant to the President. His interest in all the earth sciences fitted him to teach physical and historical geology, economic geology, hydrology and mineralogy.

From 1924 to 1936 he was assistant geologist for the U. S. Geological Survey and in 1933 consulting geologist for the Tenn Valley Authority. He served with distinction in both World War I and II. In the latter as a Lt. Colonel in the Signal Corps. He was director of the Long Branch Signal Laboratory in New Jersey. He did important research in the development of artificial quartz crystals. He was awarded the Legion of Merit Medal in 1946 for conspicuous service. He was Director of the Quartz Research at Antioch College for which he is internationally known. Dr. Swinnerton was a Fellow of the Amer. Geological Society, Fellow of the A.A.A.S. and Secy. of its Geology Section. He was a member of Sigma Xi, the Ohio Academy of Science, the Amer. Mineralogical Society, Amer. Geophysical Union, the Amer. Geographic Society and the Naturalists Speleological Society. On July 6, 1952 Dr. Swinnerton died of a cerebral hemorrhage and was buried in Oneida, New York.

#### KARL VERSTEEG

Dr. Karl Versteeg, Professor of Geology at Wooster College and member of the Geology Section.

Dr. Versteeg was born on March 10, 1891 at Pella, Iowa. After graduation from the Pella High School he entered Central College in Pella and received the Bachelor of Science degree in chemistry in 1914 and served as an assistant in the Department and nevertheless graduated with Phi Beta Kappa. His first position after attaining his degree was Science teacher in Pella High School during 1914 and 1915. From 1915 to 1917 he was principal of the high school at Preston, Minn. as well as science teacher and athletic coach, next during 1917 and 1918 he held a similar position in the high school at Neenah, Wisconsin.

During World War I he served as Director of Athletics in Camp Dodge. After the war he secured a position as athletic coach at Du Pont High School in Louisville, Ky. During summers he enrolled in the University of Chicago and in 1926 he had married Miss Helena Martha Erdman, a former Red Cross nurse he met in the Army. From 1919-1920 he was instructor in geology in the University of Idaho, next he became head of the Geology Department of the Wisconsin School of Mines from 1920-1923 and from 1923-1926 he was Assistant Professor of Geology and Geography at Wooster College and from 1926 to his death was Professor and Head of the Department. He carried extra assignments in the summers as special lecturer in meteorology and geography at Michigan College of Mines for the Army Air Force and organized the Civil Pilot training program at Wooster College 1940-41. In 1930 he received the Ph.D. degree in geology from Columbia University and in 1946 an honorary D.Sc. from his Alma mater in Iowa.

Dr. Versteeg served on many civic boards, etc. as the Conservation and Flood Control Committee of the Ohio Chamber of Commerce, member of the U. S. Chamber of Commerce, Vice-President of the Ohio Athletic conference 1947-49 and was a Fellow of the Ohio Academy of Science and Vice-President for the Geology Section in 1947. He was a member of Sigma Xi, Fellow of the Geological Society of America, Fellow of the A. A. A. S.; member of the Geophysical Union, New York Academy of Science, the A.A.U.P., the National Education Association, the Ohio Forestry Assn. and the Assoc. of American Geographers. On Oct. 10, 1952 Dr. Versteeg suffered a fatal apoplectic stroke and was buried at Pella, Iowa, survived by his wife.

A summary of this report shows that the average age of these 15 members was 61.06 years. A study of the causes of death shows that 5 deaths were due to cerebral hemorrhage, 5 to coro-

nary disease, one each to cancer, pneumonia, poliomyelitis and virus infection and a traffic accident. Cerebral accidents have now competed with an equal number of cardiac deaths. The great mortality this year in the 5 deaths due to cerebral hemorrhage naturally is associated with the fairly high average age of 61.06 years. The sections in which these members were enrolled were Geology 4, Science Education 3, Plant Science 2, and Zoology 2 and Geography, Physics, Medicine and Conservation each one—the highest mortality being in the Geology Section.

Respectfully submitted,

H. H. M. BOWMAN, *Chairman.*  
A. E. WALLER,  
J. H. MELVIN  
*Necrology Committee.*

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#### REPORT OF COMMITTEE ON RESOLUTIONS

*Be it Resolved*, that the members of the Ohio Academy of Science express to the administration of the Ohio State University and to the members of the Local Committee on Arrangements their gratitude for the excellent facilities and gracious hospitality which have enabled us to enjoy a very successful sixty-second annual meeting.

*Be it further Resolved*, that the members of the Academy extend their gratitude to Dr. Herbert Osborn for his long service as Director of the Ohio Biological Survey which he is about to terminate in his ninety-seventh year.

*Be it further Resolved*, that the members of the Academy tender their appreciation to Dr. Earl Green for his able service as editor of the Ohio Journal of Science.

*Be it further Resolved*, that the members of the Academy express to Dr. Rush Elliott their appreciation for his very able and efficient service as Secretary during the past seven years, with the hope that it may long continue.

Respectfully submitted,

G. B. BARBOUR,  
W. A. MANUEL,  
A. W. LINDSEY, *Chairman.*

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